

Docket No. 237687US0

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF:

Shao Xiang LU, et al.

SERIAL NO.: 10/622,689

FILED: JULY 21, 2003

FOR: SELF-EMULSIFYING COPOLYMER

EXAMINER: K. PENG

GROUP ART UNIT: 1712

DECLARATION UNDER 37 C.F.R. 1.132

ASSISTANT COMMISSIONER FOR PATENTS
WASHINGTON, D.C. 20231

SIR:

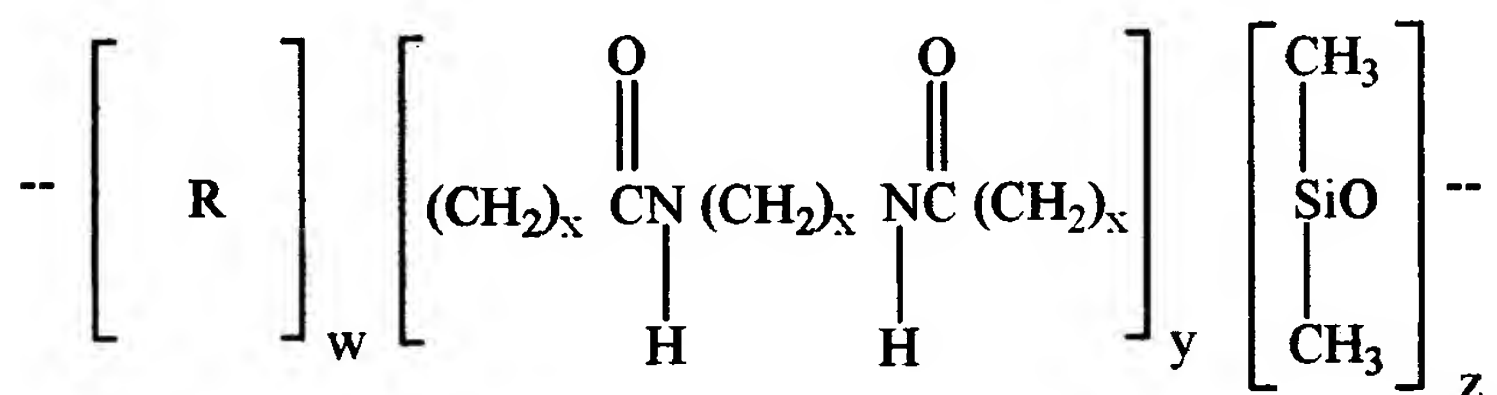
I, Shao Lu, hereby declare:

1. I am a named co-inventor on the above-identified patent application.
2. Provided below is an explanation of the difference between the polymers disclosed in the present application and the polymers disclosed in the cited references of U.S. Serial Nos. 10/166,648; 10/166,760; 10/166,755; 10/170,566; 10/170,549; 10/320,600; 10/320,599; 10/320,601; 10/166,650; 10/935,352 and U.S. Publication Nos. 2004/0001799 (10/166,762); 2003/0235548 (10/166,648); 2003/235553 (10/166,760); 2004/0126336 (10/323,649); 2003/0235552 (10/166,755); 2003/0072730 (10/170,655); 2003/0170188 (10/170,566); 2003/0068348 (10/170,549); 2004/0115154 (10/320,600); 2004/0115153 (10/320,599); 2004/0120912 (10/320,601); and 2003/0232030 (10/166,650). I am a co-inventor on 10/166,648; 10/166,760; 10/166,650; 10/935,352; U.S. Publication Nos. 2004/0001799 (10/166,762); 2003/0235548 (10/166,648); 2003/235553 (10/166,760) and 2003/0232030 (10/166,650). I am familiar with U.S. Publication Nos. 2004/0126336 (10/323,649) – corresponding to U.S. Patent 6,916,464); 2003/023,552 (10/166,755); 2003/0072730

(10/170,655; 2003/0170188 (10/170,566); 2003/0068348 (10/170,549); 2004/0115154 (10/320,600); 2004/0115153 (10/320,599); 2004/0120912 (10/320,601); 2003/0232030 (10/166,650).

3. The primary difference between the polymers of the present invention and those disclosed in the cited references is that the polymers in the present application possess emulsifying activity: they contain sufficient alkoxylation to provide the polymers with emulsifying activity. In contrast, the polymers in the cited patents and patent applications do not possess emulsifying activity.

4. More specifically, the claimed polymers have the following structure:



The “R” group in these polymers is an oxyalkylene group. This oxyalkylene group provides the claimed polymers with emulsifying activity. Without the “R” group, the claimed polymers do not possess emulsifying activity. This oxyalkylene group “R” is not part of the $\left[\right]_z$ or $\left[\right]_y$ blocks of the claimed polymers.

5. In contrast, the polymers in the cited references do not contain an equivalent structure to the claimed “R” groups: these polymers consist only of $\left[\right]_z$ and $\left[\right]_y$ blocks. For example, in U.S. patent application publication no. 2004/0001799 (“Lu”), the polymer of formula (I) (paragraph [0037]) does not contain the required “R” or oxyalkylene group. In formula (I), “G” corresponds to the “NHCO” groups in the claimed copolymers (see, Lu at par. [0049]), “X” corresponds to the “(CH₂)_x” groups terminal to the “NHCO” groups in the claimed copolymers (see, Lu at par. [0043]), and “Y” corresponds to the “(CH₂)_x” group between the “NHCO” groups in the claimed copolymers (see, Lu at pars. [0044–45]). Thus,


“G,” “X” and “Y” all correspond to elements found within the []_y block in the claimed polymers. That the “X” group may contain oxygen in the disclosed polymers is of no import: the “X” group is within the []_y block, meaning that no structure in the disclosed polymers corresponds to the “R” group of the claimed polymers.

6. All of the cited patents and patent applications disclose polymers like Lu’s formula (I) polymers. No structure or variable in such polymers corresponds to the required “R” or oxyalkylene group in the claimed copolymers. This is further highlighted by the fact that Lu’s formula (I) polymers can be used as starting materials and combined with oxyalkylene groups to produce the claimed copolymers. (See, the present application at page 5, line 25 et seq.). Because Lu’s formula (I) polymers can be used as starting materials and combined with oxyalkylene groups to produce the claimed copolymers, it follows that Lu’s formula (I) polymers do not contain the claimed “R” or oxyalkylene groups: if Lu’s formula (I) polymers and the claimed polymers were truly the same, no need would exist to modify Lu’s formula (I) polymers by adding oxyalkylene groups to them to obtain the claimed polymers. I have worked with polymers corresponding to Lu’s formula (I) polymers. An example of such a polymer is Nylon-611/dimethicone copolymer. It has been my experience that such polymers do not have emulsifying activity.

7. The undersigned petitioner declares further that all statements made herein of her own knowledge are true and that all statements made on information and belief are believe to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of this application or any patent issuing thereon.

8. Further deponent sayeth not.

SHAOXIANG LU
Name


Signature

10/05/2005
Date